

Docket No. 003252-052911

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED

Applicants:	Noth et al.		DEC 1 9 200
Serial No.:	10/082,705	Group: 3738	TECH CENTER 1600
Filed:	February 25, 2002	Examiner: To be assigned	
For:	TRABECULAR BONE-DERIVED	HUMAN MESENCHYMAL S	TEM CELLS
Assistant Cor Washington,	mmissioner for Patents D.C. 20231		
*****	********	********	****
*****	*****		
	OTED MITTER CAMES	OTS REALT TRICE	

CERTIFICATE OF MAILING

I hereby certify that this correspondence is, on the date shown below, being: deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Date:	12(12(12	4_	Knl	6		_
	Melissa K	rugge		ယ		مح
				00	.E.	
Sir:				H A	17	
Sir.	INFORMATION DISCLOSURE STATEME	ENT		20	2002	/ED
	In accordance with the provisions of 37 C.F.R. §§1.56 and 1.9	97, Ap	plicants h	즘 e	with	
subm	it the publications and/or patents shown on the attached form	PTO	-1449, for	_		

submit the publications and/or patents shown on the attached form PTO-1449, for consideration by the Examiner in connection with the examination of the above-identified patent application.

REMARKS

In accordance with the provisions of 37 C.F.R. §1.97, this statement is being filed:

<u>X</u>	(1)	within three (3) months of the Filing Date or before the mailing
		date of the First Office Action on the merits; or
	(2)	within three months of the mailing date of the PCT International
		Search Report; or

- (3) after the period defined in (1) but before the mailing date of a Final Rejection or Notice of Allowance, and the requisite Certification or fee under Rule 1.17(p), namely \$240.00, is included herein; or
 - (4) after the mailing date of a Final Rejection or Notice of Allowance but before the payment of the Issue Fee, and the requisite Certification, petition, and petition fee are included herein.

It is respectfully requested that each of the documents shown on the attached form(s) PTO-1449 be made of record in this application. Copies of these documents (CHECK ONE):

_X are enclosed herewith; and
have been cited in the parent application, and are thus not being resubmitted herein.

Early examination and allowance of the present application are respectfully solicited.

FEE AUTHORIZATION

Should any fees associated with the submission be required, the Commissioner is authorized to charge the missing fee to our Deposit Account No. 50-0850 or 14-1138. Any overpayments should be credited to said Deposit Account.

Respectfully submitted,

David S. Resnick (Reg. 34,235)

NIXON PEABODY LLP 101 Federal Street

Boston, MA 02110

(617) 345-6057



RECEIVED

DEC 1 9 2002

FORM PT	0-144	9		DOCKET NO.: 052911	SER	AL NO: 10	ENTER 1600/290 0/082,705
INFORMA	TION	DISCLOSU	JRE	APPLICANT(S): Noth et	al.		
STATEME	NT			FILING DATE: 2/25/02	GROUP	NO.: 3738	
		١	UNITED ST	ATES PATENT DOCUM	1ENTS		
EXAM. INITIALS		DOCUMEN NUMBER		INVENTOR/ASSIGNE E	CLASS	SUBCLAS S	FILING DATE IF APPROPRIA TE
	AA	5,197,985	3/30/93	Caplan et al.			
	AB	5,226,914	7/13/93	Caplan et al.			
	AC	6,214,369	4/10/01	Grande et al.			
	AD	5,486,359	1/23/96	Caplan et al.			
FOREIGN	PAT	ENT DOCU	MENTS				
	D	OCUMEN NUMBER	DATE	COUNTRY	CLASS		TRANSLATI ON SYES/NO STORY OFF OFF OFF OFF OFF OFF OFF OFF OFF OF
OTHER	DOC	UMENTS (I	NCLUDING	AUTHOR, TITLE, DAT	E, PER	FINENT PA	GES, ETC.)
	CA	1	, Stratmann, 59:124-130, 2	, U., Wiesmann, H.P., Mol 2000	krys, K., I	Bruckner, P.	, Szuwart, T.,
	CB	Beresford, J	.N., Graves,	S.E., Smoothy, C.A., Am.	J. Med. (Genet. 45:163	-178, 1993
	CC	Cheng, S.L. 55:356-362,	-	, Nelson, T.L., Warlow, P.	M., Civit	elli, R., <i>Calci</i>	f. Tissue Int.
	CD	1	•	, M., Dandapani, V., Wu, X imble, J.M., <i>J. Cell. Physi</i>	•	•	
	CE	Gundle, R.,	Joyner, C.J.,	Triffitt, J.T., Bone Vol. 16	6 (6), 597	601, 1995	

APPLICANT(S): Noth et al. STATEMENT FILING DATE: 2/25/02 GROUP NO.: 3738 CF Gundle, R., Stewart, K., Screen, J., Beresford, J.N., In: Marrow Stromal Cell Ct. 43-66, 1998	ORM PTO-14	149	DOCKET NO.: 052911	SERIAL NO.: 10/082,705
CF Gundle, R., Stewart, K., Screen, J., Beresford, J.N., In: Marrow Stromal Cell Co. 43-66, 1998 CG Jacenko, O., Tuan, R.S., Dev. Biol. 115:215-232, 1986 CH Jacenko, O., Tuan, R.S., Dev. Dyn. 202:13-26, 1995 CI Kale, S., Long, M.W., Crit. Rev. Euk. Gene Exp. 10:259-271, 2000 CJ Lecka-Czernik, B., Gubrij, I., Moerman, E.J., Kajkenova, O., Lipschitz, D.A., Manolagas, S.C., Jilka, R.L., J. Cell. Biochem. 74:357-371, 1999 CK Majolagbe, A., Robey, P.G., Developmental Biology Protocols Vol. 3, 391-397, 19: CL Mintz, K.P., Grzesik, W.J., Midura, R.J., Robey, P.G., Termine, J.D., Fisher, L.V. Bone Miner. Res. Vol. 8 (8), 985-995, 1993 CM Nuttall, M.E., Patton A.J., Olivera, D.L., Nadeau, D.P., Gowen, M., J Bone Min 13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orth. Soc, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (82) S499-S502, 199 CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993		N DISCLOSURE	APPLICANT(S): Noth et a	1.
43-66, 1998 CG Jacenko, O., Tuan, R.S., Dev. Biol. 115:215-232, 1986 CH Jacenko, O., Tuan, R.S., Dev. Dyn. 202:13-26, 1995 CI Kale, S., Long, M.W., Crit. Rev. Euk. Gene Exp. 10:259-271, 2000 CJ Lecka-Czernik, B., Gubrij, I., Moerman, E.J., Kajkenova, O., Lipschitz, D.A., Manolagas, S.C., Jilka, R.L., J. Cell. Biochem. 74:357-371, 1999 CK Majolagbe, A., Robey, P.G., Developmental Biology Protocols Vol. 3, 391-397, 1990 CL Mintz, K.P., Grzesik, W.J., Midura, R.J., Robey, P.G., Termine, J.D., Fisher, L.V. Bone Miner. Res. Vol. 8 (8), 985-995, 1993 CM Nuttall, M.E., Patton A.J., Olivera, D.L., Nadeau, D.P., Gowen, M., J Bone Min 13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orthomatology, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (82) S499-S502, 1990 CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	STATEMENT		FILING DATE: 2/25/02 C	ROUP NO.: 3738
CJ Lecka-Czernik, B., Gubrij, I., Moerman, E.J., Kajkenova, O., Lipschitz, D.A., Manolagas, S.C., Jilka, R.L., J. Cell. Biochem. 74:357-371, 1999 CK Majolagbe, A., Robey, P.G., Developmental Biology Protocols Vol. 3, 391-397, 1999 CL Mintz, K.P., Grzesik, W.J., Midura, R.J., Robey, P.G., Termine, J.D., Fisher, L.V. Bone Miner. Res. Vol. 8 (8), 985-995, 1993 CM Nuttall, M.E., Patton A.J., Olivera, D.L., Nadeau, D.P., Gowen, M., J Bone Min 13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orth Soc, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (S2) S499-S502, 1999 CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CF		, Screen, J., Beresford, J.N.,	3 7 2
CJ Lecka-Czernik, B., Gubrij, I., Moerman, E.J., Kajkenova, O., Lipschitz, D.A., Manolagas, S.C., Jilka, R.L., J. Cell. Biochem. 74:357-371, 1999 CK Majolagbe, A., Robey, P.G., Developmental Biology Protocols Vol. 3, 391-397, 1999 CL Mintz, K.P., Grzesik, W.J., Midura, R.J., Robey, P.G., Termine, J.D., Fisher, L.V. Bone Miner. Res. Vol. 8 (8), 985-995, 1993 CM Nuttall, M.E., Patton A.J., Olivera, D.L., Nadeau, D.P., Gowen, M., J Bone Min 13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orth Soc, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (S2) S499-S502, 1999 CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CG	Jacenko, O., Tuan, R.S	5., Dev. Biol. 115:215-232, 198	CEIVED
CJ Lecka-Czernik, B., Gubrij, I., Moerman, E.J., Kajkenova, O., Lipschitz, D.A., Manolagas, S.C., Jilka, R.L., J. Cell. Biochem. 74:357-371, 1999 CK Majolagbe, A., Robey, P.G., Developmental Biology Protocols Vol. 3, 391-397, 1999 CL Mintz, K.P., Grzesik, W.J., Midura, R.J., Robey, P.G., Termine, J.D., Fisher, L.V. Bone Miner. Res. Vol. 8 (8), 985-995, 1993 CM Nuttall, M.E., Patton A.J., Olivera, D.L., Nadeau, D.P., Gowen, M., J Bone Min 13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orth Soc, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (S2) S499-S502, 1999 CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	СН	Jacenko, O., Tuan, R.S	S., Dev. Dyn. 202:13-26, 1995	2002 2002 11. RO
Manolagas, S.C., Jilka, R.L., J. Cell. Biochem. 74:357-371, 1999 CK Majolagbe, A., Robey, P.G., Developmental Biology Protocols Vol. 3, 391-397, 1993 CL Mintz, K.P., Grzesik, W.J., Midura, R.J., Robey, P.G., Termine, J.D., Fisher, L.V. Bone Miner. Res. Vol. 8 (8), 985-995, 1993 CM Nuttall, M.E., Patton A.J., Olivera, D.L., Nadeau, D.P., Gowen, M., J Bone Min 13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orth Soc, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (S2) S499-S502, 199 CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CI	Kale, S., Long, M.W.,	Crit. Rev. Euk. Gene Exp. 10:2	259-271, 2000
CL Mintz, K.P., Grzesik, W.J., Midura, R.J., Robey, P.G., Termine, J.D., Fisher, L.V. Bone Miner. Res. Vol. 8 (8), 985-995, 1993 CM Nuttall, M.E., Patton A.J., Olivera, D.L., Nadeau, D.P., Gowen, M., J Bone Min 13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orth Soc, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (S2) S499-S502, 199. CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CJ	Lecka-Czernik, B., Gu Manolagas, S.C., Jilka	brij, I., Moerman, E.J., Kajke , R.L., <i>J. Cell. Biochem.</i> 74:35	nova, O., Lipschitz, D.A., 57-371, 1999
Bone Miner. Res. Vol. 8 (8), 985-995, 1993 CM Nuttall, M.E., Patton A.J., Olivera, D.L., Nadeau, D.P., Gowen, M., J Bone Min 13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orth Soc, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (S2) S499-S502, 199 CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CK	Majolagbe, A., Robey,	P.G., Developmental Biology	Protocols Vol. 3, 391-397, 1999
13:371-382, 1998 CN Osyczka, A.M., Nöth, U., O'Connor, J., Danielson, K.G., Tuan, R.S., Trans Orthologo, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (S2) S499-S502, 1999. CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonuce Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CI			G., Termine, J.D., Fisher, L.W., J.
 Soc, 47:311, 2001 CO Reddi, A.H., Cunningham, N.S., J. Bone Miner. Res. Vol. 8 (S2) S499-S502, 199. CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993 	CM	·	A.J., Olivera, D.L., Nadeau, I	O.P., Gowen, M., <i>J Bone Miner Res</i>
CP Robey, P.G., Mineralization in Biological Systems, pp 107-127., Ed by E Bonucc Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CN		U., O'Connor, J., Danielson, F	K.G., Tuan, R.S., Trans Orthop Res
Raton, CRC Press, 1992 CQ Robey, P.G., Calcif. Tissue Int. 56 (S1), S11-S12, 1995 CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CC	Reddi, A.H., Cunningh	nam, N.S., J. Bone Miner. Res	. Vol. 8 (S2) S499-S502, 1993
CR Stein, G.S., Lian, J.B., Endocr. Rev. Vol. 14 (4), 424-442, 1993	CH			op 107-127., Ed by E Bonucci, Boc
	CG	Robey, P.G., Calcif. Ti	ssue Int. 56 (S1), S11-S12, 19	95
CS Tontonoz, P., Hu, E., Graves, R.A., Budavari, A.I., Spiegelman, B.M., Genes Dec	CI	Stein, G.S., Lian, J.B.	, Endocr. Rev. Vol. 14 (4), 424	-442, 1993
1224-1234, 1994	CS		Graves, R.A., Budavari, A.I.,	Spiegelman, B.M., Genes Dev. 8

Wurzler, K.K., DeWeese, T.L., Sebald, W., Reddi, A.H., J. Craniofac. Surg. Vol. 9 (2),

Yoo, J.U., Barthel, T.S., Nishimura, K., Solchaga, L., Caplan, A.I., Goldberg, V.M.,

Johnstone, B., J. Bone Joint Surg. Vol. 80-A (12), 1745-1757, 1998

CT

CU

131-137, 1998

6 2002 SS			
ORM PTO-1449	DOCKET NO.: 052911	SERIAL NO.: 10/082,705	
INFORMATION DISCLOSURE	APPLICANT(S): Noth et al.		
	FILING DATE: 2/25/02	CDOLIDATO 2500	

RECEIVED
DEC 17 2002
TC 3700 MAIL ROOM

Please type a plus sign (+) inside this box --- + PTO/SB/21 (08-00)
Approved for use through 10/31/2002. OMB 0851-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE FTRANFA the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number **Application Number** 10/082,705 TRANSMITTAL Filing Date February, 25, 2002 **FORM First Named Inventor** Noth et al. Group Art Unit (to be used for all correspondence after initial filing) 3738 Examiner Name To be assigned Attorney Docket Number 003252-052911 Total Number of Pages in This Submission **ENCLOSURES** (check all that apply) After Allowance Communication Assignment Papers Fee Transmittal Form (for an Application) to Group Appeal Communication to Board Fee Attached Drawing(s) of Appeals and Interferences Appeal Communication to Group Licensing-related Papers Amendment/Reply (Appeal Notice, Brief, Reply Brief) Petition After Final Proprietary Information Petition to Convert to a Affidavits/declaration(s) Provisional Application Status Letter Power of Attorney, Revocation Change of Correspondence Address Other Enclosure(s) (please X Extension of Time Request identify below): Form PTO-1449; References AA Terminal Disclaimer Express Abandonment Request through AD and CA through CV; Request for Refund Certificate of Mailing; Return X Information Disclosure Statement Receipt Postcard. CD, Number of CD(s) Certified Copy of Priority Document(s) Remarks 5 Response to Missing Parts/ The Commissioner is authorized to charge fee deficiencies to the NIXON PEABODY LLP Incomplete Application deposit account 50-0850. Response to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm David S. Resnick (Reg.No. 34,235) NIXON PEABODY LLP, 101 Individual name Federal Street, Boston, MA 02110 Signature Date CERTIFICATE OF MAILING I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: 12112102 Typed or printed name Melissa Kruggel

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any commenon the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington DC 20231 DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

12/12/02

Date



PTO/SB92 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031 U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Certificate of Mailing under 37 CFR 1.8

DEC 1 9 2002 TECH CENTER 1600/2900

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

> **Assistant Commissioner for Patents** Washington, D.C. 20231

DEC 17 2002 TC 3700 MAIL ROOM

12/12/102

Melissa Kruggel

Typed or printed name of person of signing Certificate

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Information Disclosure Statement with attached Form PTO-1449 (5 pp); References marked AA through AD and CA through CV; Transmittal Form (PTO/SB/21)(1 pg); Certificate of Mailing (1 pg.); and Return Receipt Postcard.

Burden Hour Statement: This form is estimated to take 0.03 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.